

1

2

3

## MULTISERVICE NETWORK PROCESSING DEVICE

4

5

Bidyut Parruck

6

Chulanur Ramakrishnan

7

Rami Zecharia

8

Nael Atallah

9

Hung Nguyen

10

Shankar Channabasappa

11

12

### **ABSTRACT OF THE DISCLOSURE:**

13

An integrated circuit has a lookup engine, a segmentation engine, and a  
reassembly engine that can be used in various combinations such that a line card  
employing the integrated circuit is configurable to: 1) function as an ingress line  
card receiving data in cell and/or packet format from a network and supplying that  
data to the switch fabric of a router, or 2) function as an egress line card receiving  
data from the switch fabric and outputting that data in cell and/or packet format to  
a network. The switch fabric can be either a cell format switch fabric or a packet  
format switch fabric.

20

21